

**Akustika. Statistilised meetodid
mehhanismide ja seadmete
müraemissiooni etteantud väärtuste
määramiseks ja kontrollimiseks. Osa 4:
Etteantud väärtuste meetodid
seadmepartiide korral**

Acoustics - Statistical methods for determinig and
verifying stated noise emission values of machinery
and equipment - Part 4: Methods for stated values
for batches of machines

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 27574-4:1999 sisaldab Euroopa standardi EN 27574-4:1988 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 12.12.1999 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 27574-4:1999 consists of the English text of the European standard EN 27574-4:1988.</p> <p>This document is endorsed on 12.12.1999 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala: Standard annab märgistajale juhised seadmele märgitava väärtuse Lc määramiseks ja esitab statistilise valiku skeemi, et kontrollida müraemissiooni vastavust nendele märgitud väärtustele mehhanismi- ja seadmepartii korral.</p>	<p>Scope:</p>
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Võtmesõnad: akustika, mehhanismid, müra (heli), statistiline analüüs, statistiline kvaliteedikontroll

UDC 534.61 : 534.835.46 : 620.1

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English version

Acoustics

**Statistical methods for determining and verifying stated noise
emission values of machinery and equipment
Part 4: Methods for stated values for batches of machines
(ISO 7574-4 : 1985)**

Acoustique; méthodes statistiques pour
la détermination et le contrôle des
valeurs déclarées d'émission acou-
stique des machines et équipements.
Partie 4: Méthodes pour valeurs
déclarées de lots de machines
(ISO 7574-4 : 1985)

Akustik; statistische Verfahren zur Fest-
legung und Nachprüfung angegebener
(oder vorgegebener) Geräuschemissi-
onswerte von Maschinen und Geräten.
Teil 4: Verfahren für Angaben (oder Vor-
gaben) für Maschinenlose
(ISO 7574-4 : 1985)

This European Standard was approved by CEN on 1988-11-15 and is identical to the ISO Standard as referred to.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart 36, B-1050 Brussels

Foreword

In 1988, CEN/BT decided to submit International Standard

ISO 7574-4 : 1985 Acoustics; statistical methods for determining and verifying stated noise emission values of machinery and equipment; methods for stated values for batches of machines

to Formal Vote. The result was positive.

In accordance with the CEN/CENELEC Internal Regulations, the following countries are bound to implement this European Standard:

Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

Endorsement notice

The text of the International Standard ISO 7574-4 : 1985 was approved by CEN as a European Standard without any modification.

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0 Introduction

A general introduction to the four-part series of ISO 7574 is given in ISO 7574/1.

For the purposes of this part of ISO 7574, the term "labelled value" stands for all kinds of stated value (e.g. information on a label, the upper noise limit set by an authority, the agreed contract value) for which the methods may be applied.

This part of ISO 7574 contains statistical sampling methods for checking the stated noise emission values for batches (lots) of machines. The labelled value for all machines in a batch is checked by sampling procedures. A reference standard deviation is required when testing the compliance of a batch of a specific family of machines. In addition, information on the type of sampling to be used (single, double or sequential) and the sample size is required. The procedures specified in this part of ISO 7574 assume that the noise emission values of a batch (lot) of machines will follow a normal distribution. The statistical parameters upon which this part of ISO 7574 is based assume that there is a 95 % probability of acceptance if no more than 6,5 % of the noise emission values in a batch exceed the labelled value. Information is included to assist the labeller in determining a labelled value based on these statistical parameters.

The methods given in this part of ISO 7574 ensure that a batch (lot) of machines labelled in accordance with the specifications for the verification procedure have a predetermined probability of acceptance.

1 Scope and field of application

This part of ISO 7574 provides guidelines for determining the labelled value, L_C , by the labeller and specifies statistical sampling procedures for verifying compliance of the noise emissions of a batch (lot) of machinery and equipment with its labelled value.

This part of ISO 7574 is intended to assist those parties responsible for drawing up specific labelling codes for specific families

of machines. It is also intended to be of use to labellers who want their batches of machines to conform with verification procedures that are in accordance with the specifications given in the specific labelling codes based on clause 7.

This part of ISO 7574 does not deal with the consequences that ensue if the stated value is not confirmed as verified for a batch (lot) of machines.

2 References

ISO 3951, *Sampling procedures and charts for inspection by variables for percent defective*.

ISO 4871, *Acoustics — Noise labelling of machinery and equipment*.

ISO 7574/1, *Acoustics — Statistical methods for determining and verifying stated noise emission values of machinery and equipment — Part 1: General considerations and definitions*.

3 Definitions

For the purposes of this part of ISO 7574, the definitions given in ISO 7574/1 apply.

4 General

For a batch of machines, the noise emission values will cover a certain range due to the variability between the machines (relevant measure: standard deviation of production, σ_p) and due to measurement errors occurring under reproducibility conditions (relevant measure: standard deviation of reproducibility, σ_R — see 3.17 in ISO 7574/1). The measure for the overall variability is the total standard deviation, σ_t .

The aim of labelling a batch of machines is to indicate as labelled value, L_C , a limit below which a specified large propor-